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AUTHOR de Rome, E. A.; Wieneke, Chris
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ABSTRACT

The relationships between factors influencing Australian students' course choice and subsequent decisions to withdraw were studied in 1980. Questionnaires were completed at the time of college entry by 1,375 first-year arts, architecture, and engineering students at the University of New South Wales. In addition to factors relating to their field of study and sense of commitment to their course, students evaluated the university's information and advisory resources. It was found that a significant proportion of the students were not firmly committed to their field of study, and many had decided to enroll under time pressures. The existing system of providing information and advice to prospective students was not satisfactory. In particular, it was noted that students who were not recent school leavers were most likely to have had minimal pre-enrollment assistance. Information is provided on: the types of school-based advisory services that respondents consulted, the proportion of school leavers and other students who consulted 13 types of publications, and usefulness ratings of the publications consulted. A final summary lists seven recommendations for use in assisting prospective students to select their courses. (SW)

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Students' Choice of Course and use of Information and Advisory Services

E. A. de Rome

&

Chris Wieneke

April, 1981

HE 016 356

Tertiary Education Research Centre
University of New South Wales

ABSTRACT

This is the preliminary report of a study investigating the relationships between factors influencing students' course choice and subsequent decisions to withdraw.

The information was collected by questionnaire at the point of enrolment for first year students in the Arts, Architecture and Engineering Faculties at the University of New South Wales. The questions focussed on factors relating to the students' choice and sense of commitment to their course. Students were also requested to evaluate the information and advisory resources available to them.

The results showed that a significant proportion of the students were not firmly committed to their course of enrolment. Many students had made their decision to enrol under pressure of time and it was apparent that the existing system for the provision of information and advice to prospective students is not satisfactory. In particular, it was noted that students who were not recent school leavers were most likely to have had minimal pre-enrolment assistance.

It was recommended that tertiary institutions need to take a greater responsibility for the provision of information and advice to prospective students. This is partly in order to allow secondary schools to concentrate on career education rather than on considerations of course selection, but is also in recognition of the need to cater for the increasing proportion of non-school leavers entering higher education.

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1.1 Introduction

High attrition rates in universities at a time of economic stringency have led to increased concern by educationalists about the implications of human and economic wastage. There have been numerous studies of the factors associated with academic performance and discontinuation but the causes of student withdrawals have proved to be so varied that the possibility of isolating factors which could accurately predict those students likely to withdraw has remained elusive (Eaton, 1979; Hayes, 1974,1977; Maddox, 1979; Sheldrake, 1976; Watkins, 1976,1979; Williams & Pepe, 1978). The Williams Committee reported graduation rates to be approximately seventy percent of students enrolled, with the majority of discontinuing students leaving before they entered their second year (Williams Committee Report,1979). The Committee made a number of recommendations aimed at improving graduation rates. These referred to reviews of admission and selection policies, advice to prospective students, and the need for more attention to be given to teaching and learning programmes for first year students. The first two of these recommendations constitute the focus of this study.

One group of factors has repeatedly been identified as being strongly associated with student withdrawals: certainty of career and personal aspirations, goal commitment, motivation, and the quality of the first year experience (Baumgart & Johnstone, 1977; Hayes, 1974, 1977; Lewandowski et al, 1977; Maddox, 1979; Rump & Greet, 1975; Sheldrake, 1976). Sheldrake suggests that such factors, which are not related to students' academic ability, may account for at least half of the number of students who withdraw in their first year. Some students may leave for personal or financial reasons but there are grounds for concern that at the point of enrolment many students have not had either the information or the time to make a carefully considered decision.

In a survey at the University of Melbourne in 1976, 200 full-time students were asked about their course decisions. Only twenty-eight percent felt that their course decision had been the result of careful consideration (Report of the Orientation and Transition Working Group, University of Melbourne, 1976). In an earlier survey at the University of Sydney in 1974, Coyte found that thirty-nine percent of first year students said they had experienced 'a lot of difficulty' in deciding their course preferences and eleven percent 'seriously regretted' the order of preferences they had registered with the Admissions Centre. In addition, twenty percent had not decided on the course that was their first preference until after they had received their H.S.C. results, and over sixty-

six percent claimed that they 'did not have much idea' of the content of most of their subjects (Coyte, 1974).

There has been some work on the information needs of prospective students which suggests that tertiary students in general do not have sufficient access to appropriate information and advice when they are choosing their courses (Nelson-Jones & Toner, 1978; Watkins, 1976a). However, while agreeing with this conclusion, recent Australian studies have suggested that this is at least partly because students do not use the resources that are available (Davies, 1977, 1978; Weaving, 1978).

The restrictions of time placed on students when making their final course decision are unfortunately inherent in the existing system for admission to tertiary education in New South Wales. In this State, as in most other States, there is a co-ordinated admissions system for tertiary education. When it was first introduced in 1969, the system was known as MUAC (Metropolitan Universities Admissions Centre), and it co-ordinated applications for admission to the three Sydney metropolitan universities. In 1980 the system was expanded to include 18 other colleges and institutes throughout New South Wales and the Centre was renamed UCAC (Universities and Colleges Admissions Centre). Before final year secondary students sit for their Higher School Certificate (HSC), they register a series of up to eight preferences for their choice of tertiary course. Each preference refers to a specific course at a specific institution, so a student may apply for similar courses at a number of institutions, or a variety of courses at the same institution.

In January, when the results of the HSC are announced, UCAC combines each student's obtained HSC aggregate with the entrance criteria for each of the eight course preferences and their corresponding entry quotas. The entry criteria are based on HSC aggregates and may fluctuate in accord with demand for places in those courses. Students are then offered the course highest in their order of course preferences for which they are acceptable. Successive rounds of offers are made as students accept or reject places and the complex process is repeated until either all the places in courses have been filled or until there are no more students with acceptable HSC aggregates who have applied for those courses. The first round of offers takes place at the beginning of February and students have only one week to decide whether to accept an offer or reject it in the hope of receiving a second round offer for a more preferred course. Students may change their preferences up until approximately one week after they have received their HSC results. This effectively means that they have only one week to reconsider their course preferences if their HSC aggregate

was not as they had hoped. In fact, in 1980 43% of Category A students changed their preferences in January, presumably after they had received their HSC results (UCAC First Report, 1980).

(Category A students are defined by UCAC as those students who attempted the New South Wales HSC in the year prior to enrolment and who are no more than 20 years old.)

It would appear from the apparent difficulty students experience when deciding on their course preferences, that at least a proportion of students have made a general commitment to studying at a university prior to choosing a specific course or career. The reasons for this non-specific commitment may range from family or social expectations through to default of having reached a vocational decision. That is, while some of these students may come to university because they are expected to, others may come in the hope that it will help them to choose an occupation. Such students, having decided to attend a university, may apply for a range of courses and their final choices are dependent on their HSC results and the offers they receive. Such a speculative approach would seem likely to lead to inappropriate enrolment decisions resulting in poor motivation and subsequent withdrawal.

2.1 The 1980 Choice Survey

The survey described in this report had two major aims. The first was to provide information on first year students enrolling in the Faculties of Arts, Architecture and Engineering at the University of New South Wales, with emphasis on the factors relating to their choice of course. A prime consideration here was an evaluation of the information and advisory resources available to prospective students. The second aim was to establish an information base which could be used for comparative purposes in a follow-up study. The follow-up study was designed to compare the students who subsequently discontinued their courses with those who persisted, the basis of comparison being their responses to the Choice Survey and to an additional survey conducted during 1980.

The information obtained from the Survey will provide the substance of this report. Subsequent reports will detail the results of the follow-up study.

The students surveyed were enrolling in 1980 for the first time in either Arts, Architecture or Engineering. These Faculties were chosen largely because of concern expressed about the admissions procedures which selected their first year students. These Faculties also represented, rather conveniently, courses which lead to a professional career as well as those which are not vocationally oriented.

The questionnnaire was administered in Unisearch House, the University Enrolment Centre, as part of the enrolment procedure for students entering those Faculties. Students were asked to give their names and addresses so that follow-up questionnaires could be sent to them during the year. Completed questionnaires were obtained from 1,375 students, representing 86% of the total first year enrolments for those Faculties (See Table 1).

Table 1. Distribution of students by sex and age group in each Faculty.

Arts

Age Group

Sex	15-20	21-25	26-99	Total	Percent
Male	195	25	40	261	35.3
Female	348	46	84	478	64.7
Total	543	71	124	739	100
Percent	73.5	9.6	16.8	100	

Architecture

Age Group

Sex	15-20	21-25	26-99	Total	Percent
Male	151	12	5	168	80.8
Female	36	1	3	40	19.2
Total	187	13	8	208	100
Percent	89.9	6.3	3.8	100	

Engineering

Age Group

Sex	15-20	21-25	26-99	Total	Percent
Male	351	29	18	399	92.1
Female	31	2	1	34	7.9
Total	382	31	19	433	100
Percent	88.2	7.2	4.4	100	

Although this sample was generally representative of those Faculties in terms of the proportions by sex and course, part-time students were under-represented. Only five percent of those surveyed were part-time students although part-time students make up twelve percent of the total first year student enrolment in these Faculties. The reasons for this discrepancy are not clear: it may be that work commitments prevented part-time students from attending the regular enrolment sessions where the Survey took place. These students may well have enrolled later, directly at the Admissions Office.

2.2 The Questionnaire

One weakness of studies which have related poor motivation to subsequent withdrawal is that they have been retrospective. For example, Hayes (1974,1977), reported withdrawing students to have said they were less certain of their career and personal aspirations at the time of enrolment than were those students who persisted with their studies. However, the students in Hayes' study were selected after they had withdrawn from their courses and were then asked to recall how they had felt about those courses at the time they had first enrolled. The difficulty with this approach is that studies of incoming students characteristically report high levels of optimism at the point of enrolment (Katz & Barrett, 1972; Wieneke, 1976, 1979). It seems reasonable to suggest that the difference between the results of the two types of study may be due to the discontinuing students' recall being affected by their need to rationalise their decision to withdraw by arguing that they had not been very committed at the time they enrolled.

Working on the assumption that poor motivation and discontinuation might be related to ill-advised course decisions, it was decided to investigate the notions of choice in relation to commitment to a course of study. To overcome the inherent difficulties of retrospective studies, it was necessary to establish at the point of enrolment the degree of confidence and commitment that students felt toward their course. The difficulty was whether it is reasonable to expect students on enrolment day to admit on an official questionnaire to feelings of uncertainty with respect to their course commitment. By focusing on such related questions as the type and value of information resources used, the point at which final decisions had been made, and the difficulties encountered, we hoped to determine the bases of the students' decisions and choices without compromising their self-confidence. The questionnaire (see Appendix A) was designed to discriminate between groups of students according to their means of entry and the types of information and advice to which they should have had access. These groups include school leavers, older matriculated students, mature age un-matriculated students, technical college matriculants, and some overseas students. (School leavers in this study are defined as secondary school students who matriculated in 1978 or 1979.)

The Questionnaire

The majority of questions in the Survey instrument were concerned with the students' choice of course: how and when this choice had been made and whether the course and institution of enrolment were those of first preference. In addition, some questions were included in an attempt to estimate the students' commitment to the course of enrolment. Other questions were included in order to broaden the information base for comparative purposes in the follow up study and will not be discussed here.

3.1 Course Choice and Commitment

The choice of institution and course was not a great problem for students entering tertiary education until the mid sixties. At that stage, a number of new universities were established and with the introduction of the Colleges of Advanced Education (CAE's), a much wider variety of courses became available. In addition to some courses which had not previously been recognised at the tertiary level, there were also courses which became available at both universities and CAE's. At about the same time quota systems were introduced, so that students had not only a wider variety of courses and institutions to choose from but they also had to compete for places. This resulted in increased emphasis being place on the HSC as the means of entering the institution and course of first choice.

In 1969, 10,842 students, representing 85% of the eligible applicants were offered a place by MUAC. 77% of these offers were for the students' first preference course (MUAC Report, 1969). In 1980, with the expansion of MUAC into UCAC, there were 38,279 eligible applicants but only 79% were offered a place and only 59% of these places were first preferences (UCAC First Report, 1980). In effect, this meant that of the 30,133 students who received an offer for a tertiary place in 1980, 26% were offered courses other than their first preference. In all, this amounted to 7,931 students about half of whom were offered their second preference and a quarter of whom were offered their third preference. The remaining 1,658 students received offers for courses that had been fourth or lower on their list of preferences. One can only speculate as to whether these students had seriously considered the possibility of being offered one of their lower preferences.

The issue of course choice is very complex. A student may gain the field but not the specific course of first choice. Whether this constitutes a failure to gain their course choice depends on the course and institution involved, and on the goals of the student. For example, students who apply to study medicine and are accepted but to a less preferred institution may be disappointed but would presumably have the same opportunities to pursue their professional goals. However, students aspiring to study Arts (Communications) at the New South Wales Institute of Technology may be thwarted if the best offer received is for Arts at another institution where Communications is not a specialty. These hypothetical cases deal with people who ostensibly get the field of first choice. There are also many students whose lists of preferences encompass a wide range of fields. For example, students may

include medicine, law, engineering and commerce, although it would seem unlikely that all of these courses could be conceived of as equally viable alternatives. If indeed, such students are equivocal about the general field they wish to enter, does this mean that they will be equally happy and successful in any of these courses? Or are these the students who will subsequently discontinue their courses due to lack of commitment?

3.2 The results of the Survey

In the 1980 Choice Survey, students were asked at what stage they had decided on the course that was their first choice, whether they were enrolled in the course and at the institution of their first choice and, if not, when they had first considered the course of enrolment as a serious alternative. In the following section the information obtained from these questions is related to other factors including the Faculty of enrolment, the students' satisfaction with their H.S.C aggregate, and the confidence and commitment they express with regard to their final enrolment decision.

In 1980, 26% of UCAC offers were for other than first preference courses, but at the University of New South Wales the proportion of these offers was a much higher 37%. In the Faculties included in the Choice Survey, 45% of Arts, 42% of Architecture and 29% of all Engineering course offers went to students for whom these courses were not their first preference (UCAC First Report, 1980). In the Choice Survey 31% of the students had accepted offers and enrolled in courses that had not been their first preference (See Table 2).

Table 2. Proportion of students in First preference Course and Institution.

	Course of Enrolment		
Institution	1st Choice %	Not 1st choice %	Total %
UNSW 1st choice	59	18	77
UNSW NOT 1st choice	10	13	23
Total	69	31	100

A breakdown of the data by Faculty shows that Arts students were less likely to be enrolled in their course of

first choice than Architecture or Engineering students (See Table 3).

Table 3 Faculty by course preference.

Faculty	Course Preference: 1st Choice %	Not 1st Choice %
Arts	64	36
Architecture	73	27
Engineering	75	25
Total	69	31

The interpretation of these results is difficult as we do not know precisely what students mean by the 'course' of first choice, It depends whether by a different course they mean a different field or another course within the same field, perhaps at another institution.

Generally those students not enrolled in the course of first choice had a better than even chance of being in the institution of first choice. That is, of the students who were not in their first choice course, 58% were at the institution of first preference. This was most likely for Arts students and least likely for Architecture students (See Table 4).

Table 4. Students NOT in their first choice course by Faculty and Institutional preference.

Faculty of Enrolment	Institutional Preference: UNSW 1st Choice	UNSW NOT 1st Choice
	%	%
Arts(n=262)	59	41
Architecture (n=55)	53	47
Engineering (109)	67	43
Total	58	42

If they were in the institution but not the course of first choice it leaves one to speculate as to what courses these students did want. Within the Architecture and Engineering Faculties entry requirements vary for different courses. Some students may have gained entry to the Faculty but not the course that they most wanted. For example there were 56 students from the Faculty of Architecture who were not in the course of first choice; 34 of these students were enrolled in the Architecture Course which had the second lowest HSC aggregate entry requirement for that Faculty. It may well be that some of these students had hoped to enrol in the higher aggregate entry courses such as Town Planning or Landscape Architecture but took Architecture as a second choice.

This explanation is less probable with the Engineering Faculty as, of the 109 students not in their first choice course, 58 were enrolled in Electrical Engineering which has the highest entry aggregate for that Faculty. As 34 of these 58 students were at the institution of first choice, one is led to assume that these students wanted courses in quite different fields. At the University of New South Wales in 1980, the only courses whose entry aggregates exceeded that of Electrical Engineering were Law, Medicine, Psychology, Optometry and Health Administration, all fields quite different from Engineering. This apparent incongruity among student preferences is not unusual. In Coytes' (1974) survey, across all Faculties at the University of Sydney, out of the 376 students who were not enrolled in their first preference, 36% had wanted Medicine and 32% had chosen Law as their first preference. Further work is being carried out to clarify this point with regard to the students in the 1980 Survey. However the fact remains that over 30% of the students in the 1980 Survey were not enrolled in the course they had apparently most wanted.

When students were asked how their HSC aggregate compared with what they had expected, a substantial number (47%) had been disappointed with their HSC results. Relating this to whether or not students gained their first choice of course, predictably we find that those not in their first choice course were more likely to have been disappointed with their HSC aggregate (see Table 5).

Table 5. Access to the course of first choice and students' HSC performance compared with their expectations.

Course of Enrolment

HSC Results	1st choice n	1st choice %	NOT 1st choice n	NOT 1st choice %	All students n	All students %
Better than expected	122	15	23	6	145	12
As expected	281	35	91	23	372	31
Worse than expected	324	40	237	61	561	47
Didn't know what to expect	76	10	40	10	116	10
Total	803	100	391	100	1194	100

In most cases there would be a simple relationship between not achieving a sufficiently high HSC result and not gaining access to a chosen course. In addition, there is the question of whether the 'first choice' that students are referring to, is the one they put on their initial application to UCAC in October 1979, or is a revised preference decided after they received their HSC results. As noted previously , 43% of Category A students changed their preferences in January 1980, presumably after they had received their HSC results. This, in fact, masks the proportion of students who may be enrolling in the courses into which they believe they are most likely to be accepted rather than the courses which they most want.

The information contained in Tables 2-5 when considered together with the debate on the utility and reliability of the HSC as a selection device (Smurthwaite, 1976; West et al, 1979), suggests that the current sole dependence on the HSC for admissions may be having an unfortunate effect on enrolment patterns as school leavers enrol in courses for which they are eligible rather than in which they have a specific interest. There is also some evidence which suggests that students who make their course choices after school are less likely to persevere with those courses than are students who made their choices in secondary school (Beswick,1979).

In order to gain some estimates of students' commitment to their first choice course, they were asked to indicate the stage at which they had selected the course of their first preference. The results are shown in Table 6.

Table 6. Stage at which the first preference course was decided.

1st Preference decided	Course of Enrolment: 1st choice n	1st choice %	NOT 1st choice n	NOT 1st choice %	Total %
Primary school	21	3	11	4	3
Junior secondary	78	12	29	9	11
Senior secondary	332	53	197	65	57
When applying to UCAC	99	16	36	12	14
After HSC results	70	11	23	8	10
Other	32	5	7	2	4
Total	610	100	303	100	100

From this table we can see that 25% had not decided on their first choice of course until they were forced to do so - either when applying to UCAC, or after they had received their HSC results. Also, 78% of those not enrolled in their first choice course had made that choice early but were forced to reconsider when not offered that option. Of the 308 school leavers in our sample who were not in their first choice course, 45% had not seriously considered the course in which they finally enrolled until after they had received their HSC results. This occurred more frequently among Arts students than among the other students surveyed. Table 7. Stage at which School Leavers first considered the course of enrolment as a serious alternative to their first preference.

Alternative course 1st considered	Course of Enrolment: Arts %	Architecture %	Engineering %	Total %
Secondary school	24	42	46	32
When applying to UCAC	17	22	23	19
After HSC results	55	31	28	45
Other	4	5	3	4

These figures suggest that entry to the Arts Faculty is far more likely to have been a last minute decision for students who had not gained access to their first preference.

Course Choice and Commitment

In view of the presumably limiting factors of disappointing HSC results and failure to gain entry to first preference courses, students were asked how confident they felt about their final enrolment decision. Surprisingly, most were fairly confident that the course they were enrolled in was the best one for them (See Table 8).

Table 8. Confidence in enrolment decisions related to access to course of first choice.

Confidence	Course of Enrolment: 1st choice n	1st choice %	NOT 1st choice n	NOT 1st choice %	All students n	All students %
Not very confident	32	3	50	12	82	6
Fairly confident	500	53	269	63	769	56
Very confident	416	44	107	25	523	38
Total	948	100	426	100	1374	100

Predictably, those students not in their first choice course were less inclined to be confident about their enrolment. Even so the majority of this group were at least fairly confident in their enrolment decision. Although few apparently had serious doubts as to the suitability of their course selection, elements of uncertainty were manifest in responses to other questions. When asked about their feelings towards the course in which they had just enrolled, only 65% of the students seemed to be quite happy and contented in their commitment (See Table 9).

Table 9. Commitment to the course of enrolment.

	Total %	Arts %	Arch %	Engin %
I am very pleased to have been accepted into this course.	39	33	43	46
I feel confident that I will enjoy and do well in this course.	27 / 66	25	29	28
The order of preferences was not really important, I would have been happy with any of my top preferences.	3	2	5	3
I was a bit disappointed with this offer but having accepted, I wouldn't change even if I received another offer.	3	4	1	4
I hope this course will help me to sort my ideas of what I would like to do.	13	16	8	11
I am not really committed to this course, I may leave or transfer if I don't like it.	4	3	7	3
I will probably try to transfer to another course next year.	7	12	2	2
Other	4	4	5	3

In fact, 11% expressed the intention to consider leaving or transferring and a further 13% were looking to the course to help them sort out their ideas of what it was they wanted to do.

A question was also included asking students to consider, in the event of their not completing their degree, the likelihood of a variety of factors contributing to their decision to withdraw. This question was basically designed to estimate the students' willingness to contemplate the possibility of not finishing their course, but was also intended to identify what obstacles, if any, they anticipated to finishing the course of enrolment (See Table 10).

Table 10. Factors considered likely to contribute to withdrawal decisions.

	%	n
Course content not what was expected	32	433
Developed interest in another field of study	46	625
Offer of a good job	28	387
Difficulty with the quantity of required reading	21	284
Changed mind about career intentions	35	487
Course too difficult	34	469
Other	6	77

It is difficult to say very much about the results from this particular question as the range of alternatives offered was too limited and was dominated by items relating to choice. Other items relating to factors such as finance, family and personal problems and travel etc. should have been included to offer students a range of factors commonly associated with discontinuation. However, it is interesting that such a high proportion felt that a change of interest in the field of study or career intentions would be a likely factor if they were to withdraw. In fact, 59% of Arts, 54% of Engineering and 49% of Architectures students saw these factors as possibilities in the event that they were to discontinue their courses.

3.3 Summary

In summary, the data presents an interesting view of first year students. A substantial proportion of the students had not performed as well as they had expected in the HSC. A little over 30% were enrolling in courses that had not been their first preference, while an additional 10% were enrolling in the course but not at the institution of their first preference. In addition some 22% made their course decision under pressure of time after they had received their HSC results, either because they had not gained entry to their first preference, or because they had not decided on their first preference until that time. Despite these rather limiting factors, a very high proportion of the students claimed to be at least fairly confident that they had made the right course decision. It is interesting, however, to find that this does not necessarily mean that these students intend to continue in this particular course to graduation. For some the current enrolment is a stepping stone to another course; for others it is the opportunity to work out what they want to do with their lives. Less than half the students could, on the basis of these results, be considered to be firmly committed to the course of enrolment. These are those who felt that it was unlikely that they would develop interest in a different field of study or change their mind about their career intentions.

The next section is concerned with the information and advisory resources upon which the students based their course decisions.

4.1 Information and Advisory Resources

Studies of students' reasons for entering tertiary education have identified a number of factors which are commonly found to be influential. These include desire for occupational security, success at relevant school subjects, family and peer expectations, contact with people already in the occupation, and personal ideals and preferences (Anderson et al, 1978; Beswick, 1979). The manner in which students investigate alternative courses has received less attention, but the information that is available is not encouraging (Davies, 1977,1978, Orientation & Transition Working Group, 1976; Weaving, 1978).

Since the mid 1970's there have been a number of developments in career education in Australia. The Commonwealth Department of Employment and Industrial Relations has set up Career Reference Centres and the State Education Department has introduced Career Education courses into the secondary school system. In New South Wales, the Division of Vocational Guidance Services has also become more active in trying to ascertain and fulfil the needs of school leavers for information and advice. Students coming into the University in 1980 should thus have had a much greater exposure to career information and advice than their peers of a few years ago. Whether this has made any difference is of great interest, particularly in the light of claims that students do not use the resources that are available to them (Davies, 1977,1978; Weaving, 1978).

In trying to assess the impact of initiatives in career education and guidance it was necessary to take note of the type of institution the student attended for matriculation. Students from the State secondary school system should, theoretically, have been exposed to a co-ordinated system of career education over at least the last two years of school. Students from the non-State schools are likely to have had varying experiences of career guidance programmes because each school sets its own programme. These programmes vary widely: some schools do not have any Careers Advisors as such and Career Education may be synonomous with an annual visit to the Vocational Guidance Bureau or to the Careers Reference Centre. Other schools have highly organised and active Career Education programmes, sometimes centred upon a network of 'old boys', who organise visits and other forms of contact with people engaged in industries of interest to students. Students from rural areas are particularly disadvantaged in this respect as even with a very active Careers Advisor in the school, the facilities for contacts with a variety of occupational fields are extremely limited. The situation is naturally quite different again for

those students who have not come directly to university from secondary school. For the majority of these students information and advice is not so readily available and they must actively seek out assistance when they come to make their course decisions.

It might be expected that the confidence students claimed in respect to their course decisions would be related to the information and advice they had at their command when making those decisions. A list of information and advisory resources available to prospective students was compiled. A full description of these resources is contained in Appendix B. Students were asked to identify and evaluate those resources with which they had contact when making their course choice. The results from these questions are treated separately for school leavers and for the other categories of students because of their differential access to advisory services.

4.2 The Advisory Resources Consulted by School Leavers.

The advisors who appear to have been most useful to school students were: parents and other close relatives, friends, people working in the field, and university students. This conclusion is based on the mean usefulness rating for each group together with the number of students who consulted them (See Table 11).

Table 11. Usefulness ratings of Advisory sources consulted by school leavers.

	Students who consulted	Not very useful %	Useful %	Very useful %	Mean** usefulness rating
Parents & Family	89	23	48	28	3.04
Own friends	73	33	48	19	2.86
School Careers advisor	68	40	49	11	2.71
School teacher	65	25	53	22	2.97
People working in that field	63	9	45	46	3.36
University students	57	13	54	33	3.20
Vocational Guidance	42	44	42	14	2.69
Career Reference Centre	39	33	48	19	2.86
Academics	36	19	48	33	3.13
University counsellors	28	13	53	34	3.22

** The mean Usefulness Rating is calculated from the rating scale. A value of '2' indicated 'Not very useful'; '3' was 'Useful' and '4' was 'Very useful. A mean rating of below 3.00 indicates that a substantial proportion of students (>25%) found that advisory resource to be of little use.

Both academics and university counsellors were rated as 'useful' but the proportion of students who consulted them was relatively small (36% and 28% respectively). These latter figures are difficult to interpret as this University does not have any career/ course counselling services per se. It is therefore difficult to establish to whom these students were referring when they said they had consulted an academic or university counsellor.

Approximately 600-700 prospective students consult each year at this University with either the Student Courselling & Research Unit, or the Advisor for Prospective Students. This

figure is particularly difficult to relate to the 28% of our sample who said they had consulted a university counsellor, as the total of 600-700 prospective students represent only 16% of the actual first year intake. Every two years the University holds an Open Day, an important feature of which is a Course Advisory Centre for Prospective students. An Open Day was held in 1979, so it is possible that some of the students in the Survey may have consulted with academics or counsellors at that time. Prospective students may make appointments to see members of the academic staff but an informal survey of the Departments involved in this study suggests that few students take advantage of this prior to enrolment. The facilities for course counselling, though available at this University are fragmented and it may even be the case that some of those students who said they had consulted a counsellor or an academic when making their course decision, were actually referring to the academic course advisors and administrative staff to whom they spoke at the enrolment centre when they enrolled.

Those advisory services which are specifically aimed at assisting students in their career decisions were not generally regarded as being very useful. In fact School Careers Advisors and the Vocational Guidance Bureau were described as 'not very useful' by 40% and 44% respectively, of those students who had consulted them. The advisory services actually based in universities or in the relevant industry were understandably rated as more useful but unfortunately few students had used them.

A surprisingly large number of school leavers reported little contact with any of these advisory resources. Although school leavers as a group would generally be regarded as having the best access to most of these facilities, 29% had not consulted a school careers advisor and 31% claimed not to have even consulted a school teacher with regard to their course decision. Students not in their first choice course were only marginally less likely to have consulted a school careers advisor or teacher, which suggests that the problem is not restricted to those who had to re-assess their goals after they had left school. Students from private schools were somewhat less likely to have consulted a school careers advisor than State school students, which is not surprising as many of the private schools do not have Careers Advisors (See Table 12).

Table 12. School based advisory services by type of school.

	Proportion of School Leavers who consulted		
	State school n=601 %	Regional Catholic n=95 %	Independent school n=243 %
School Careers Advisor	74	60	65
School Teacher	68	78	61
Parents & family	92	93	89
Own Friends	76	81	75
People in that field	65	76	63
Academics	36	50	41
Vocational Guidance	45	54	38
Career Reference Centre	41	59	36
University Counsellor	27	38	30
University students	59	67	65

There appeared to be some consistent trends in the advisory resources consulted by students from the different types of schools. The students from the Regional Catholic Schools seemed to have consulted the most widely. They were least likely to have consulted School Careers Advisors but this appeared to have been compensated for by the school teachers and by contact with most of the other resources listed. Students from the Independent schools were more likely to have consulted their families or people working in the occupation or field of interest, than the information centres such as Vocational Guidance or the Career Reference Centre. Students from the State schools were least likely to have consulted academics or university students and most likely to have consulted School Careers Advisors. However comparisons between the State school and private school students are somewhat tenuous as the students from the private schools were far outnumbered in this sample by the State school students.

4.3 Overseas, Technical College and Older Students.

Whereas one would reasonably expect a difference between school leavers and the other categories of students in terms of their access to the school-based advisory services, the differences continued to be evident throughout our list of advisory resources.

Table 13. Usefulness ratings of advisory resources consulted by non-school leavers.

	School leavers %	Other students %	Not very useful %	Useful %	Very useful %	Mean usefulness rating
Own friends	73	62	19	55	26	3.07
Parents & family	89	57	23	55	22	2.98
People in that field	63	50	9	50	41	3.32
University students	57	42	12	61	27	3.14
School teachers	65	36	27	49	23	2.95
Academics	36	31	18	49	33	3.15
University counsellors	28	30	12	47	40	3.28
School careers advisors	68	27	38	47	15	2.77
Vocational Guidance	42	22	53	36	11	2.59
Career Ref. Centre	39	20	33	51	16	2.84

Nb. The proportions of school leavers who consulted each resource have been included in this Table for comparison.

The categories of students who were not school leavers represented almost 32% of the sample. This group includes mature age matriculated and un-matriculated students, students who studied for their HSC at a technical college and overseas students. Facilities vary for these students but generally speaking little formal provision is made for assisting them in deciding which would be the most appropriate tertiary course. Although these students are not excluded from access to most of these advisory facilities, it would appear from our results that they make minimal use of them.

The groups perhaps least likely to be disadvantaged in this respect would be technical college students and mature age un-matriculated students. The former have access to student counsellors and course information officers at most technical

colleges. It was apparent from the results that the Technical College students had consulted more of the advisory resources than had any of the other non-school leavers. The mature age un-matriculated students had consulted the least, with the exception of University counselling staff. The un-matriculated students, unlike other groups, are severely restricted in the range of courses that are available to them. As such, having made the decision to come to University, their choices are more likely to be concerned with subjects rather than courses and consequently most of the career/course oriented counselling services would be largely irrelevant to them. These students were, however, more likely to have consulted university counsellors. The students who appear to have had the least contact with any advisory services were the overseas and the older matriculated students. (See Table 14)

Table 14. Advisory services used by the different categories of non-school leavers.

	Mature-aged* %	Older students %	Technical college %	Overseas %	Other %
School Careers advisor	4	29	33	28	23
Parents & Family	30	57	68	59	50
School teachers	10	31	51	33	33
Friends	41	59	76	54	62
People working in the field	42	47	52	56	58
Academics	25	28	33	26	44
Vocational Guidance	15	23	24	18	25
Career Reference Centre	11	20	24	15	22
University counsellors	42	25	30	23	33
University students	27	34	53	49	39

* Mature age un-matriculated.

In summary, the various categories of non-school leavers were in substantial agreement with the school leavers in evaluating the usefulness of the various advisory services. People in the field, university counsellors, academics, university students and personal friends and family were generally considered to be the most useful sources of advice. The advisory services specifically aimed at assisting students in their career decisions were not generally regarded as being very useful. People actively engaged in the field of interest or working at a university were considered to be the most useful resources. Unfortunately, they were consulted by fewer students which probably means that they are less accessible or perhaps less visible.

4.4 Published Sources of Information

Currently this institution relies mainly on printed material to inform prospective students about available courses. We asked students to identify and evaluate those publications and other media resources with which they came into contact while choosing their courses.

Table 15. Proportion of school leavers and other students who consulted the following publications.

	Students who consulted		
	School leavers %	Other students %	Total n
Faculty Handbooks	82	81	1119
UCAC Students' Information Guide	65	39	866
Alternative Students Handbook	16	23	419
Background to Careers	76	34	866
Higher Education Handbook	41	22	477
Directory of Tertiary Courses	23	18	295
CES Job Guide for Australia	14	9	165
Job Prospects	31	19	373
Opportunities for school Leavers	22	12	260
Graduate Outlook	16	14	213
Careers information in the media	49	32	604
Careers Information films	33	15	379
Vocational Guidance pamphlets	47	20	528

The publications most frequently consulted were the Faculty Handbooks, Background to Careers, and the UCAC Students'

Information Guide (see Table 15). The latter two were consulted by a far greater proportion of school leavers than other students.

The surprising aspect of these data is the proportion of students who had not apparently consulted these publications: almost 20% had not consulted a Faculty Handbook. One problem to be noted here is that a charge is made for the Faculty Handbooks and this may deter some students from browsing through a range of courses prior to making their enrolment decision. In addition the new Faculty Handbooks are not usually available until December although initial applications to UCAC close on the first of October. In the absence of Faculty Handbooks, the UCAC Guide is probably the most comprehensive guide to courses available in New South Wales. The 35% of school leavers and 61% of other enrolling students who claimed not to have consulted the UCAC Students' Information Guide is hard to explain as everyone who applies for a tertiary place through UCAC receives a copy of the Guide with their application form, so one would have expected every student to have used this publication. There are other comparative course guides available, these include the Higher Education Handbook and the Directory of Tertiary Courses but neither publication was used by a large number of the students surveyed (35% and 21% respectively), although these publications do cover courses offered by institutions not included in the UCAC Guide.

Although there were substantial differences between the proportions of school leavers and other students who consulted the publications listed, the students tended to agree in their evaluations of usefulness and accordingly their responses have been combined in the following table.

Table 16. Usefulness ratings of publications consulted

	Total number who consulted	Usefulness ratings			
		Not very useful %	Useful %	Very useful %	Mean usefulness rating
Faculty Handbooks	1119	6	48	46	3.41
UCAC Students' Information Guide	782	19	58	23	3.04
Alternative Students Handbook	419	20	62	18	2,98
Background to Careers	866	26	53	21	2.95
Higher Education Handbook	477	23	60	17	2.95
Directory of Tertiary Courses	295	28	61	11	2.83
CES Job Guide for Australia	165	47	48	5	2.59
Job Prospects	373	27	56	17	2.91
Opportunities for school Leavers	260	40	50	10	2.69
Graduate Outlook	213	29	60	11	2.82
Careers information in the media	604	31	56	13	2.82
Careers Information films	379	44	46	10	2.66
Vocational Guidance pamphlets	528	32	55	13	2.81

The CES Job Guide for Australia and Opportunities for School leavers were considered to be 'not very useful' by over 40% of those who had consulted them. This is no reflection on these publications as they are not aimed at supplying information about tertiary courses. Careers information films were also found to be 'not very useful' by 44% which is disappointing but not surprising as only a few films are available and most are out of date. The remaining publications

listed in this section were generally considered to be 'useful' but many of those specifically designed for prospective tertiary students were used by only a small proportion of the students (see Tables 15). The Faculty Handbooks were the only information source rated as being 'very useful' by a substantial proportion of the students (46%).

In addition to noting and rating the advisory and information resources contacted, students were asked to identify from a list any difficulties they had experienced in deciding what to do after they left school. A high proportion (70%, n=958) said they had experienced some difficulty. A breakdown by Faculty of the answers to this question follows in Table 17.

Table 17. Difficulties encountered when making course decisions.

Difficulties encountered	Arts %	Arch %	Engin %	Total %
Not enough time between HSC results and accepting offers.	10	9	8	10
Difficulty finding information about courses	13	23	18	16
Difficulty finding information about jobs	10	16	11	12
Choosing between different alternatives	25	35	30	29
I had no clear idea of what I wanted to do	24	14	13	19
I experienced no difficulties	28	25	37	30

*Percentages in this table are not additive as students may have indicated more than one difficulty.

The Engineering students apparently experienced fewer difficulties than the Architecture or Arts students. In each Faculty the most frequently cited problem was that of choosing between alternative courses. The second most frequently cited problem for Architecture and Engineering students was finding course information, whereas for 24% of the Arts students it was

having no clear idea of what they wanted to do. This latter result together with the 36% of Arts students not in their first choice course tends to confirm the idea that many students enter the Arts Faculty almost by default.

4.5 Student Comments and Requests

At the end of the questionnaire students were invited to write comments and suggestions for ways in which assistance to prospective students might be improved. The response rate to this section was 86% and as the question was directed towards school leavers it is instructive that almost all of them had something to say. The 14% of students who did not respond to this optional section were almost exclusively older or overseas students. The size of the response rate in itself could be taken to indicate quite widespread discontentment with the current system of information and advice for prospective students.

Table 18. Content analysis of Student comments. (n=1179)

15% asked for more contact with academics, professionals and students.
14% asked for more work and course experience opportunities.
13% asked for more contact with universities while still at school.
12% asked for Careers Advisors to be made available in every school and college.
10% asked for information on what was actually involved in courses.
12% asked for active career guidance programmes.
10% said that there was sufficient information available but that it was up to the students to seek it out., a number commented that the sources of the information were not sufficiently well publicised.

Other suggestions included requests for more time between the receipt of HSC results and commitment to courses, for information to be easy to understand and for information to be available before the closing dates for UCAC applications.

5.1 Conclusions

The results of this survey provide evidence that a significant proportion of students entering this University are enrolled in courses which they have chosen under pressure of time and on the basis of limited information or advice. While the results do not necessarily imply that these are decisions which will later be regretted, it was evident that many of the students were without a sense of particular commitment to their course. It was also apparent that the existing pre-enrolment information and advisory services do not cater satisfactorily for the needs of prospective students.

Only 59% of the students were in their first choice of course and institution, and over half felt that a change of interest in their field of study or career intentions would be a likely factor if they were to withdraw. In fact, 25% were either already prepared to consider transferring courses or saw their current enrolment as an opportunity to sort out what they would like to do in the future. Their irresolution may be viewed as a positive sign of open-mindedness and flexibility quite appropriate to the average age of the students. However, the tertiary education system in this country does not have the corresponding flexibility to allow students to easily alter the direction of their studies. There are exceptions to this and it is worth noting that since this survey was conducted, 575 out of the 813 first year Arts students who enrolled in 1980, have made 868 variations to their enrolment programmes. This figure refers to students dropping and changing subjects but does not include those who discontinued their entire course. (Information supplied by the Arts Faculty Office)

While the survey produced evidence that Arts students were least likely to feel committed to their course at enrolment, approximately twenty per cent of the Architecture and Engineering students surveyed also expressed some reservations. Unfortunately, the same degree of mobility within courses is not available to these students. Their choices at enrolment are decisive and it is consequently crucial that they receive adequate information and advice when making their decisions. The extent to which the Arts students altered their enrolment programmes may also be taken to suggest that some of these students had not received adequate information prior to enrolment.

An appraisal of the list of advisory resources consulted in Tables 11-16 would support the contention (Davies 1977,19778; Weaving 1978) that students do not make full use of the resources available. However, on examination we find that the services specifically set up to assist students in their career

decisions were not generally regarded as being very useful, whereas other less formally accessible resources were regarded as being very useful, but unfortunately fewer students had access to them. These more useful resources included people working in the field professionally, university students, academics and university counsellors. Students from State schools were just as likely as non-State school students to have consulted people who worked in the field of interest but they were less likely to have consulted university students, academics or counsellors.

All students were asked at the end of the questionnaire to give their comments on the pre-enrolment services available to prospective students. It was apparent that students preferred personal contacts to printed information when making their course decisions. Their suggestions for the improvement of pre-enrolment advisory services mainly referred to the formalization of these types of contacts. Indeed it seems intuitively reasonable that regardless of how much information a student may have accumulated, there is a human need to talk things over with an informed person when making such an important decision. However it would seem that the existing system for selection does not take sufficient note of the critical nature of the student's decision, surely one of the most significant decisions an individual ever has to make.

In this report we do not seek to criticise the career education provisions in secondary schools, although the fact that approximately 30% of the school leavers did not consult a school careers advisor, and half of these students didn't even consult their school teachers with regard to their course choice, are matters for concern. We should also make note of the request by 12% of the students for careers advisors to be available in every school and college. However, the results raise the issue of the need to distinguish between career and course counselling. Almost 40% of the school leavers said their school careers advisor was not very useful in assisting them with their course choice. In fact, it is not the aim of the career education programmes, at least in the State schools, to advise students on the relative merits of different tertiary courses, but rather to assist them in the broader area of vocational choice.

Obviously career education programmes in schools cannot function without taking some account of courses and entry requirements in tertiary institutions. However, given the complexity of the tertiary education system, and accepting that only a relatively small proportion of HSC candidates actually enrol in tertiary courses, it is perhaps unrealistic to expect the school to take on much more of the burden of course advice. It seems quite appropriate for the school system to focus career

education programmes on exposing students to a wide variety of vocational options, assisting them to recognise and develop their personal abilities and inclinations and generally preparing them to be able to seek out information and make decisions as the need arises.

School careers advisors cannot and should not be expected to be authorities on tertiary courses, however recognition of this requires that the tertiary institutions take a greater role and responsibility in assisting students to determine their most appropriate course. The need for this becomes all the more apparent when we realise that 32% of our sample were not school leavers. In addition, of the school leavers, 22% had selected their first preference course after they had received their HSC results, by which time they no longer had ready access to teachers or career advisors. Consequently while responsibility for the pre-enrolment services remain largely with the secondary schools a high proportion of commencing students will continue to be disadvantaged in terms of their access to appropriate advice and information.

The position of those students who are not school leavers indicates a need for immediate action with regard to course information and advice. As a group these students had consulted very few of the advisory resources listed. Possibly the major potential resource for these students would be the Careers Reference Centre. Unfortunately, although this is the main information and advisory service outside the educational institutions, it was consulted by less than 40% of the school leavers and by only 20% of the other students. In each case, approximately one third of those who used it rated the Centre as 'not very useful'. However, these results may be explicable purely in terms of the conditions under which the Centre is operating.

The Centre is essentially a careers reference library with printed and audio-visual materials. It is located close to the city but is open only during business hours. Consequently it is very difficult for school students or workers to use except during their vacations. It seems obvious that such a Centre should be open on week-ends to make the resources genuinely available to anyone who might wish to use them. The fact that there is a staff of only two counsellors available, although the Centre serves the entire Sydney metropolitan area, means that only a small minority of the 50,000 students who come to the Centre each year can receive individual counselling. The majority are school students who come in school groups, under which circumstances, with limited time and large numbers, individual counselling is out of the question, and the staff at the Centre concentrate on introducing the students to the information resources available. Unless these students return

to the Centre in their own time they could perhaps be pardoned for not appreciating its potential.

It is suggested that an efficient and relatively economical means of improving the assistance available to all prospective tertiary students would be to develop the existing resources of the Careers Reference Centre. The necessary measures would include widely publicising the Centre and its resources, extending the hours it is open to include weekends and increasing the number of advisors available to counsel students.

While the HSC remains as the sole selection device for tertiary education a crisis atmosphere is likely to prevail in the period between the announcement of the HSC results and enrolments, during which time advisory services are seriously overloaded. Improvement could be achieved by the establishment of a centralized advisory service to operate during this pre-enrolment period (January and February). Such a service could be coordinated by UCAC and staffed by representatives of all the tertiary institutions including those not associated through UCAC.

Compliance with student requests for more personal contacts whenthey are making their course decisions would be in accord with the findings of British researchers who investigated the student selection process. Saunders and Lancaster (1980, p62) found personal contact with credible sources to be the primary means by which students found out about alternatives and changed their attitudes. It was suggested that because of the importance of personal relationships in the decision making process, institutions would be better served by the use of public relations activities than by the attempted dissemination of information by the traditional methods of broshures and display advertising. This particular study discussed the process of student choice with regard to institutional recruitment strategies. However the basis of the strategies is equally applicable to information services which are not recruitment oriented.

Among the students' suggestions, work and course experience opportunities were frequently mentioned. There is quite an extensive work experience programme already in operation in N.S.W. State schools, for students from year 9 to year 11. Most of the professional fields are involved in the programme. the aim of which is to give students first hand experience of the day to day tasks of the occupation in which they are interested. A student would typically be placed for one week for a day or half day per week over a longer period. Student

access to particular occupations varies according to the location of the school. For example, in rural areas the range of work experience possibilities is restricted. Work experience programmes have also been introduced in to some non-State schools.

Tertiary course experience programmes have not been equally developed although some institutions, mainly CAE's, do invite school groups on day excursions. La Trobe University, which is a relatively small university with an annual first year intake of approximately 800 students, has for the past three years been offering course experience opportunities to final year secondary school students. Usually the students are scheduled over a two week period to attend selected lectures and other classes. Students are required to apply through their school and are accepted subject to an interview which includes some career and course counselling. They are also sometimes given preparatory reading material. Each year fifty places are offered, which represents just over 6% of the annual first year intake at La Trobe. One criticism of this type of programme has been that the secondary school students may be overwhelmed and discouraged by the academic level of the lectures or classes they attend. At La Trobe, this has apparently not been a problem. Care is taken in selecting the classes to be attended and some departments even organise special classes and guided tours to introduce students to unfamiliar subjects.

Student response has been favourable and although no attempt has been made to establish whether the experiences have had an impact on subsequent choice of course or career, the general impression conveyed by students has been one of enthusiasm coupled with surprise that university is so different from school. The only problem reported so far has been the apparent reluctance of the secondary students to miss two week of school during their last year. It has not been possible to offer the course experience programmes during the school vacation as in Victoria the school and university vacation periods tend to overlap. An alternative could be to offer the course experience programmes in parallel with the work experience offered to students in year 11. (Information obtained from the Work Experience Programme Co-ordinator, La Trobe University).

The common request from the students in the survey for prospective students to have contact with the University while they are still at school, suggests that it may be a fruitful exercise to investigate the possibilities for extending this type of provision. For example, initially final year secondary students from local schools could be invited to take part in seminars on the needs of prospective students. Such seminars

could be presented as part of the Open day programme. The logistics of offering course experience programmes in an institution as large as the University of New South Wales may be daunting, however for a number of years seminars for secondary students have been held at this University and the problems have obviously not proved insurmountable. For the past ten years the Faculty of Engineering at this University has invited 300 final year secondary school students to take part in a four day seminar programme. Each year the seminar focuses on some aspect of Engineering as an applied science in relation to another field of work such as medicine or law. The function of these seminars is to stimulate students at that time when they are choosing their future career goals and is avowedly non-recruitment oriented. The Faculties of Architecture and Law also hold seminars for secondary students which are professionally oriented in terms of informing students about the scope of these disciplines.

One of the most notable comments made by students in the Choice Survey was that the necessary information was available but that it was up to the student to seek it out. Some commented that the sources of this information were not sufficiently well publicised.

Printed information, though more easily obtained was generally found to be less useful than personal contacts. This may be because printed information does not answer all the students' questions and may also be difficult to understand. The fact that 16% of the students said they had experienced difficulty finding information about courses and 11% said they had had difficulty finding information about employment prospects suggests that there is a need to revise the format and content of the available literature. However, this type of information was already available to a certain extent in publications such as the Higher Education Handbook and the Directory of Tertiary Courses, neither of which were used by many students. The fact that many students experienced difficulty in finding information, although it is generally speaking available, bears out the suggestion that it is not sufficiently well publicised it also indicates the need to co-ordinate and simplify the information.

Perhaps the most obvious line of action for this institution would be to revise and expand the scope of the Faculty Handbooks as these were the single information resource most likely to be consulted by students. In addition the Handbooks need to be made available well in advance of the closing date for UCAC applications in October. This immediately presents problems as it has not been possible, in the past, to produce Handbooks until the very end of the year. This is largely unavoidable as new courses need to be incorporated into the Handbooks.

A more feasible suggestion would be for the production of Faculty Information Guides for prospective students. These would essentially fulfil the same role as the current Faculty Hand books in as far as prospective students are concerned but would do so more efficiently. The Faculty Guides would present detailed information about the structure and aims of courses, the content of subjects, the types of personal and academic skills considered useful or necessary, the work load and the type of career opportunities likely to arise out of the completion of such courses. They should be written so that they are easily comprehensible to school age students and others who have had no previous experience of tertiary education. In reference to this it is useful to note that a recent American study found college recruitment literature to be unsuitable for the target audience as the reading level of the material was appropriate to college graduates (Johnson & Chapman, 1979). We do not know whether this charge would also apply to the corresponding literature in Australia but the common request for information that is not difficult to understand does suggest that this may be so. An advantage of the Faculty Guides is that they would not need to be revised each year and could thus be readily available to students at the time they are deciding their course preferences.

In addition to supplying a wider information base than in the Faculty Handbooks, it also seems to be necessary for Schools and Faculties within the University to increase the availability of advisory services to prospective students One way in which this provisions could be expanded at this institution would be to hold the course advisory center for prospective students, normally associated with Open Day, every year instead of every second year.

The fact that academics were found to be among the most useful advisors for prospective students lends weight to the proposal that their availability should be formalised. Improvements to the content of published information would certainly reduce some of the difficulties of the prospective students, however, as stated earlier, there is a point at which students need to discuss their ideas with an informed person. This is evident in the students' preference for advisory resources rather than printed information. It is suggested that each Faculty appoint a member of the academic staff to the role of Advisor for prospective and enrolled students. The Advisor would also be responsible for the production of the Faculty Information Guides and for the formulation of selection and admissions policy proposals for that Faculty.

Apart from concurring with students' requests for career advisors to be available in every school and college, the conclusions of this study focus on the need for advisory

services which are independent of the secondary schools. In fact, most of the recommendations refer to action by the tertiary institutions. It is, however, suggested that one major resource centre should be developed which is independent of both secondary and tertiary institutions. This would serve as an impartial resource which is able to co-ordinate information from all the institutions and which is accessible to all potential students. The Careers Reference Centre is currently the major resource fulfilling this type of role, although other possible nominees for such development could be the Division of Vocational Guidance Services or the Higher Education Board.

While the findings of the survey suggest that there is probably adequate information available it was apparent that it was not readily accessible to all students. It was also evident that many students found the resources not to be useful when they did consult them. The information needs of prospective tertiary students are relatively easy to define and have been documented in more detail in other studies (Andresen & de Rome 1980; Watkins 1976). Presenting this type of information in a suitable format should not prove too difficult a task once the need is recognised.

At the University of New South Wales since this Survey was conducted, some new measures have been undertaken to assist prospective students. The Arts Faculty has introduced Information evenings for mature age un-matriculated students and the School of Building in the Architecture Faculty has produced a booklet for prospective students along much the same lines as the Faculty Information Guides suggested here. There remains, however, a general case for this institution to increase the career and course counselling services available to prospective students. Specifically it is suggested that each Faculty appoint a member of the academic staff to be responsible for career and course counselling for prospective and enrolled students, for the production of a Faculty Information Guide for prospective students, and for the formulation of admissions and selection policy proposals for that Faculty. In addition it is suggested that this institution investigate the possibilities for offering prospective students a range of opportunities to become acquainted with the courses they are contemplating. These could include work and course experience programmes, seminars and the extension of the Open Day course advisory service to become an annual event.

The follow-up to this study will investigate the relationship between the circumstances surrounding the students course choices and subsequent decisions to withdraw.

SUMMARY

This report is the first of a series based on an investigation of the relationships between factors affecting students' choice of course and subsequent decisions to withdraw. The information presented here was collected by questionnaire at the point of enrolment from 1,375 first year Arts, Architecture and Engineering students at the University of New South Wales in 1980.

The results showed that a significant proportion of the students were not firmly committed to their course of enrolment. Many had made their decision to enrol under pressure of time and it was apparent that the system for the provision of information and advice to prospective students is not satisfactory.

Currently the mainstay of the pre-enrolment advisory services are the secondary schools, however, this fails to take note of the changing nature of tertiary student populations. The effects of this were evident as 32% of the students survey were not school leavers and they reported the least contact with pre-enrolment services.

It was suggested that the existing system for selection and admission does not take sufficient note of the critical nature of the decisions and choices made by students entering tertiary education. There may even be grounds to suggest that tertiary education becomes a speculative venture for some students, who enrol in courses for which they are eligible by virtue of their HSC results rather than in which they have some specific interest. Only 59% of the students were enrolled in the course and at the institution that had been their first choice. While the vast majority claimed to be confident that their enrolment decision was appropriate, almost 25% also saw their current enrolment as either a stepping stone to another course or as an opportunity to sort out their ideas.

All students tended to agree in rating personal contacts with people engaged in the field of interest to be far more useful in assisting students to make their course decisions than were those services set up specifically to assist students in this way. The more useful resources were, however, apparently less accessible and relatively few students had consulted university academics or counsellors.

The findings led to the conclusion that this University should take a greater role in assisting prospective students to select their courses. It was also suggested that a major resource centre which is independent of the secondary and tertiary institutions should be developed.

Recommendations included:

- Each Faculty to appoint a member of the academic staff as advisor for prospective and enrolled students.

- The production of Faculty course information guides for prospective students.

- The introduction of work and course experience programmes, and seminars for prospective students.

- The extension of the University Open Day with the Course Advisory Service to become an annual rather than a bi-annual event.

- The Careers Reference Centre to be open on weekends and perhaps evenings to allow school students and workers to use the resources.

- A major centralised resource centre to be developed which is independent of the educational institutions and accessible to all potential tertiary students.

- A centralised advisory service to be operated during the pre-enrolment period in January and February. The service to be coordinated by UCAC and staffed by representatives from all tertiary institutions.

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APPENDIX A

The Questionnaire

THE UNIVERSITY OF NEW SOUTH WALES

TERTIARY EDUCATION RESEARCH CENTRE

INCOMING STUDENTS QUESTIONNAIRE - CHOICE STUDY 1980

Dear Student,

This questionnaire is part of a study concerned with helping students with the decisions they have to make when they leave school. It is not a test - we are interested in what influenced your decision to come to university.

Later in the year we may contact you again to find out how you feel then about your choice of course. For this reason we have asked for your name and address.

All the information you give us will be held in the strictest confidence and will not be seen by anyone except the Research Centre staff. Please therefore, feel free to give frank answers to all the questions.

Thank you for your time and co-operation in making this study possible.

Incoming students questionnaire - Choice Study 1980

Office use only

Column

Surname_____, Given names_____.

Home address_____

_____ 1 - 4

Student Registration Number_____ (see enrolment form) 5 - 11

Telephone No. _____ Post code _____

Please answer these questions by ticking the appropriate box.

For example -

This University is:

1. Macquarie
2. New South Wales ✓ 2
3. Sydney

1. What is your sex?

1. Male
2. Female 2 12

2. What was your age in years at the 1st January, 1980? 13 - 14

3. When did you complete your HSC or equivalent matriculation?

1. 1979
2. 1978 2
3. Earlier (specify)_____ 3
4. I am a mature age non-matriculated student 4
5. Other (specify)_____ 5 15

4. Where did you study for your HSC/Matriculation?

1. State High School
2. Regional Catholic High School 2
3. Independent Catholic College 3
4. Independent Non-catholic College 4
5. Technical College 5
6. Overseas 6
7. Other (specify) _____ 7 16

5. What was your HSC aggregate?
(if not applicable - leave blank) 17 - 19

6. How does your HSC aggregate compare with what YOU had expected?

1. Better than expected
2. As expected 2
3. Worse than expected 3
4. Did not know what to expect 4
5. Not applicable 5 20

Column

7. If you matriculated BEFORE 1979, and have taken a break of one or more years between leaving school and coming to university, what was your most important reason for taking the break? (Tick one only)

1. I wanted to get some work experience first.	☐	1
2. I didn't intend to go on to university at that stage.	☐	2
3. I wanted more time to think about my future.	☐	3
4. Financial reasons.	☐	4
5. Not applicable	☐	5
6. Other (specify)_____	☐	6

21

8. In which of the following are you enrolled?

1. Arts (3400)	☐	1
2. Arts-Education (3410)	☐	2
3. Architecture	☐	3
4. Town Planning	☐	4
5. Industrial Arts	☐	5
6. Landscape Architecture	☐	6
7. Building	☐	7
8. Civil Engineering	☐	8
9. Electrical Engineering	☐	9
10. Mechanical Engineering	☐	10
11. Surveying	☐	11
12. Other (specify)_____	☐	12

22

9. Are you enrolled as a:

1. Full time student	☐	1
2. Part time student	☐	2

23

10. How long will it take you to travel to University each day?

1. Less than half an hour	☐	1
2. Just under one hour	☐	2
3. Just under one and a half hours	☐	3
4. Just under two hours	☐	4
5. More than two hours (specify)_____	☐	5
6. Don't know yet	☐	6

24

11. Is the University of New South Wales the institution of your first choice?

1. Yes	☐	1
2. No	☐	2

25

12. Are you enrolling in the course of your first choice?

1. Yes	☐	1
2. No	☐	2

26

13. If you are now enrolled in a course other than your first choice, when did you first consider this course as a serious alternative? (Tick one only)

1. In secondary school before I received the UCAC forms.	☐	1
2. When I had to fill in the UCAC forms.	☐	2
3. After I received my HSC results.	☐	3
4. Not applicable	☐	4
5. Other (specify)_____	☐	5

27

14. How confident are you that the course you have enrolled in is the best course for you?

1. Not very confident	☐	1
2. Fairly confident	☐	2
3. Very confident	☐	3

28

Column

15. ALL STUDENTS

When did you decide on the course that was your FIRST choice.

1.	In primary school	1
2.	In junior secondary school	2
3.	In senior secondary school	3
4.	When I filled out the UCAC application form	4
5.	When I received my HSC results (matriculation results)	5
6.	Other (specify)_____	6

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16. From the following list please identify those people with whom you have had some contact in connection with your course decision. Use the following scale to indicate how useful you found each one. (Tick one box for every row.)

		Not Consulted 1	Consulted: Not very Useful 2	Consulted: Useful 3	Consulted: Very Useful 4	
1.	School career adviser	1				30
2.	Parents or other close relatives	2				31
3.	School teacher	3				32
4.	Own friends	4				33
5.	People working in that field	5				34
6.	Academics teaching in the field	6				35
7.	Vocational Guidance	7				36
8.	Careers Reference Centre	8				37
9.	University counselling staff	9				38
10.	University students	10				39
11.	Other (specify)_____	11				40

17. From the following list, please identify those publications and other resources with which you came into contact, while choosing your course. Please use the following scale to indicate how useful you found each one. (Tick one box for every row.)

		Not Consulted 1	Consulted: Not very Useful 2	Consulted: Useful 3	Consulted: Very Useful 4	
1.	Faculty Handbooks	1				41
2.	Alternative Students Handbook	2				42
3.	Background to Careers	3				43
4.	Higher Education Handbook	4				44
5.	Directory of Tertiary Courses	5				45
6.	CES Job Guide for Australia	6				46
7.	Job Prospects	7				47
8.	UCAC Students Information Guide	8				48
9.	Opportunities for School Leavers	9				49
10.	Graduate Outlook	10				50
11.	Any career information programmes (in the media, T.V., newspapers)	11				51
12.	Career information films	12				52
13.	Vocational Guidance Pamphlets	13				53
14.	Other (specify)	14				54

18. What sort of difficulties, if any, did you experience in deciding what you would do after you left school?

1. No difficulty	☐ 1	55
2. Not enough time between HSC results and accepting offers.	☐ 2	56
3. Difficulty finding out information about courses.	☐ 3	57
4. Difficulty finding information about employment.	☐ 4	58
5. Choosing between different alternatives.	☐ 5	59
6. I had no clear idea of what I wanted to do.	☐ 6	60
7. Other (specify)_____	☐ 7	61

19. How important were the following factors in influencing your decision to enrol in this Course? (Tick one box in each row.)

	Very Important 1	Fairly Important 2	Not at all Important 3	
1. My parents, teacher or career advisor thought this course would suit me.				62
2. I chose this course because it involved the subjects I was best in at school.				63
3. I personally know someone who works in this field.				64
4. I am particularly interested to study in this field.				65
5. This course offers good employment prospects.				66
6. Other (specify)_____ _____				67

20. How do you feel now about the course you have just enrolled in? Please select the statement which best represents your feelings at this stage. (Tick one box only)

1. I am very pleased to have been accepted into this course.	☐
2. I was a bit disappointed with this offer but having accepted it I would not change even if I received another offer.	☐
3. I am not really committed to this course, I may leave or transfer if I don't like it.	☐
4. The order of preferences was not really important to me, I would have been happy with any of my top preferences.	☐
5. I feel confident that I will enjoy and do well in this course.	☐
7. I will probably try to transfer to another course next year.	☐
8. I hope this course will help me to sort out my ideas about what I would like to do.	☐
9. Other (specify)_____ _____	☐ 68

21. *Suppose for some reason you do not complete this degree. Please* consider the likelihood of each of the following factors contributing to your decision to withdraw.

		Likely 1	Not Likely 2	
1. Course content not what was expected	1			69
2. Developed interest in another field of study.	2			70
3. Offer of a good job.	3			71
4. Difficulty with the quantity of required reading	4			72
5. Change of mind about career intentions.	5			73
6. Course too difficult.	6			74
7. Other (specify)_____	7			75

22. Most students have some problems when they have to decide what they will do after they leave school. What sort of help do you think schould be made available to students in this position?

Thank you very much for your time and patience in helping us with this survey.

APPENDIX B

Published Sources of Information

Career and Course advisory publications specified in the survey

1.	Alternative Students Handbook	- Produced annually by the Students Union on campus. Each year a number of subjects are selected and the students asked to answer a questionnaire on the quality of the course and the teaching experienced. The Handbook is essentially a series of reports tabulating the results of these surveys.
2.	Background to Careers	- Department of Industrial Relations and Technology Division of Vocational Guidance Services, Sydney, Government Printers.
3.	CES Job Guide for Australia	- Careers Resources Section, Department of Employment and Youth Affairs, A.G.P.S. 1979.
4.	Directory of Tertiary Courses	- Commonwealth Department of Education, A.G.P.S. 1979.
5.	Faculty Handbooks	- Separate handbooks are published by the University for each Faculty and give details of all courses and subjects offered by that Faculty. They also outline the major rules and procedures effecting students' progression to their degree.
6.	Graduate Outlook	- Graduate employment and training in Australia Graduate Careers Council of Australia, Hobson Press (Australia) Pty. Ltd. 1979.
7.	Job Prospects	- Careers Resource Section, Department of Employment on Youth Affairs, A.G.P.S. 1979.
8.	Opportunities for School Leavers	- Hobson Press (Australia) Pty. Ltd. 1979.
9.	The Higher Education Handbook (Publication ceased 1979)	- A guide to University and advanced education courses in N.S.W. and the A.C.T. N.S.W. Higher Education Board, 13th Floor, A.D.C. House, 189 Kent Street, Sydney. N.S.W. 2000
10.	U.C.A.C. Students Information Guide	- Universities and Colleges Admissions Centre, Challis House, 10 Martin Place, Sydney. N.S.W. 2000
11.	Vocational Guidance pamphlets	Available on most careers from Division of Vocational Guidance Services, 1 Francis Street, East Sydney. N.S.W.